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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/574,411	05/18/2000	Yutaka Yokoyama	13613	7920

23389 7590 10/05/2004

SCULLY SCOTT MURPHY & PRESSER, PC
400 GARDEN CITY PLAZA
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EXAMINER

REKSTAD, ERICK J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/574,411

Applicant(s)

YOKOYAMA ET AL.

Examiner

Erick Rekstad

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,10-14 and 16 is/are rejected.
- 7) ☐ Claim(s) 2,3,6,7,9,15 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This is a first action for application 09/574,411 in response to the request for continued examination filed August 9, 2004 in which claims 1-7, 9-16 and 18 from the after final amendment filed June 7, 2004 are presented for examination.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 7, 2004 has been entered.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement filed August 21, 2000 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Response to Arguments

Applicant's arguments with respect to claims 1-7, 9-16, and 18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 5, and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,682,204 to Uz et al in view of US Patent 6,091,460 to Hatano et al.

[claims 1 and 12]

Uz teaches the use of a rate controlling method for an MPEG encoding system (Col 1 Lines 8-13 and Lines 18-19). Uz further teaches the use of a decision circuitry (controller) for determining a magnitude of motion (average motion) of said input frames relative to said reference frames and a time-varying rate of change (deviation from average) of said magnitude of motion derived from said magnitude of motion (Col 11 Lines 18-33, Fig. 1B). Uz further teaches the determining an interval between successive frames of said predictive coded pictures (scene change) according to the magnitude of motion and the time-varying rate of said magnitude, and reordering said input frames according to the determined interval (Col 11 Lines 29-48). Uz does not teach the MPEG encoding system is an encoding/decoding system. As shown in Figure

1, Hatano teaches it is well known in the art that an MPEG encoder is both an encoder and decoder (Col 1 Lines 16-49). It would have been obvious to one of ordinary skill in the art at the time of the invention that the MPEG encoding system of Uz is also a decoder as taught by Hatano.

[claims 4, 10 and 11]

Uz teaches the uses of an input buffer to hold the incoming video sequence (Col 8 Lines 3-5). As shown in Figure 1B, Uz further teaches the uses of a motion estimation unit (70) for determining motion vectors (Col 7 Lines 60-62), a coding/decoding circuitry (80) for providing motion-compensated inter-frame prediction and a controller (90) for mean value calculation and time-varying rate of change calculation. The controller further determines an interval (scene change) between successive frames of said predictive coded pictures according to the calculations (Col 1 Lines 36-67, Col 11 Lines 18-33). Uz does not teach the second memory for storing a reference frame. Hatano teaches the uses of a memory (16, Fig. 1) for storing reference frames for motion vector detection as a well known part of an MPEG encoder (Col 29-35). The MPEG encoder further comprises a motion-compensation unit (17), a subtraction unit (10), encoding circuitry (11, 12 and 19), a decoding circuitry (13 and 14) and a summing circuitry (15) as required by claims 10 and 11. It would have been obvious to one of ordinary skill in the art at the time of the invention that the MPEG encoder of Uz contains a second memory as Hatano teaches that the second memory is well known in the art.

[claims 5 and 14]

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Uz teaches the apparatus of claim 4 further configured to vary said interval inversely with said mean value and said time-varying rate (Col 11 Lines 29-34). That is, the scene change is detected when the time-varying rate is above a threshold. The scene change causes a decrease in the interval between predictive-coded frames by forcing a new GOP. Note, that the time-varying rate is based on the average rate and therefore the interval is changed based on both the average rate and time-varying rate.

[claim 13]

As shown above for claim 12, Uz teaches the calculation of the mean value of the detected motion and time-varying rate of said mean value (Col 11 Lines 28-33). If the motion in the particular frame exceeds the threshold a scene change is determined (Col 11 Lines 29-33). It is therefore obvious the test is made at frame intervals.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uz and Hatano as applied to claim 13 above, and further in view of US Patent 6,473,459 to Sugano.

[claim 16]

Uz and Hatano teach the method of claim 13. Uz and Hatano do not teach determining the mean value in horizontal and vertical components. Sugano teaches the operation of obtaining the horizontal and vertical components separately and then using the components to determine change in the video signal (Col 5 Lines 27-35, Fig. 7). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the equation of Uz and Hatano to use Sugano's method to obtain the difference only in the horizontal direction and only in the vertical direction.

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Allowable Subject Matter

Claims 2, 3, 6, 7, 9, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 703-305-5543. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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